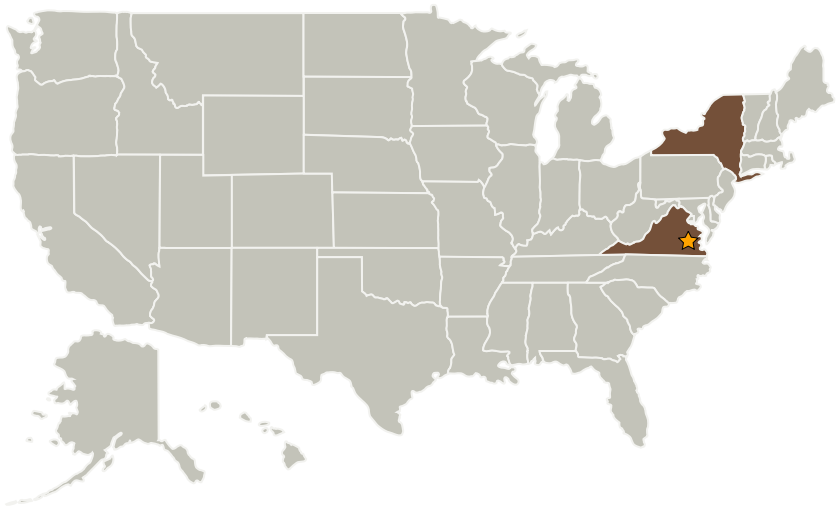
Reactive In-flight Multisensor Security System (RIMSS), Phase II

Completed Technology Project (2007 - 2007)

Project Introduction

The need for in-flight event detection and monitoring systems is clear. To address this and other safety and security needs, IEM proposed the Reactive In-flight Multisensor Security System (RIMSS) an affordable system which would improve safety and security within an aircraft by: ?detecting abnormal events (including but not limited to unusual passenger/crew activities, losses of pressure, deviations from flight plan, movement or fire in cargo areas, etc.) ?automatically alerting the crew to these events ?recording the entire event Phase I demonstrated that this system was feasible, practical, and well positioned to assist in NASA's Protected Asset Flight System (PAFS). In Phase II, IEM will develop a full prototype of RIMSS featuring: ?an innovative and unique multisensor data fusion engine, IEM's Smart Sensor Situation Understanding System Architecture (S3USA) ?unique hardware (optics, DSP-based integrated processor, imaging and acoustic arrays) ?Proprietary and innovative software (object/event detection, identification, tracking, biometrics, etc.) ?aircraft certified automatic communication with ground stations when events detected ?compression for video over limited bandwidth ?other innovations as detailed. Boeing's Phantom Works is keenly interested in RIMSS' potential for aircraft safety monitoring, and will assist in the development and demonstration of RIMSS.

Primary U.S. Work Locations and Key Partners



Reactive In-flight Multisensor Security System (RIMSS), Phase II

Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Small Business Innovation Research/Small Business Tech Transfer

Reactive In-flight Multisensor Security System (RIMSS), Phase II

Completed Technology Project (2007 - 2007)

Organizations Performing Work	Role	Type	Location
★Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
International Electronic Machines Corporation(IEM)	Supporting Organization	Industry Minority-Owned Business, Small Disadvantaged Business (SDB)	Troy, New York

Primary U.S. Work Locations	
New York	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Project Manager:

David P Radzanowski

Principal Investigator:

Robert M Lighfoot

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.5 Range Tracking, Surveillance, and Flight Safety Technologies